

Water-Data Report 2008

351440080000601 Local number MG-031, Piedmont Major Aquifer Study Site 52, near Mt. Gilead, NC

 Piedmont and Blue Ridge crystalline-rock aquifers
 Argillite

Montgomery County, NC

LOCATION.--Lat 35°14'40", long 80°00'06" referenced to North American Datum of 1983, Montgomery County, NC, Hydrologic Unit 03040104, on Secondary Road 1127, 2 mi north of Mt. Gilead.

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.--Depth 230 ft. Upper casing diameter 6 in; top of first opening 87 ft, bottom of last opening 230 ft.

PERIOD OF RECORD.--November 2007.

REMARKS.--Well is part of the National Water Quality Assessment Program (NAWQA).

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 1 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Time	Sample medium and type	Depth to water level, feet below LSD	Water level, depth below MP, feet	Barometric pressure, mm Hg	Dissolved oxygen, mg/L	Dissolved oxygen, percent of saturation	pH, water, unfltrd field, std units	Specifc conductance, wat unf µS/cm	Specifc conductance, 25 degC
			(72019)	(61055)	(00025)	(00300)	(00301)	(00400)		
Nov										
14...	1145	Ground water, replicate	42.00	43.40	752	2.6	27	7.2	220	
14...	1146	QC - Ground water, replicate	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 2 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, mg/L (00915)	Magnes-ium, water, mg/L (00925)	Potas-sium, water, mg/L (00935)	Sodium, water, mg/L as CaCO3 (00930)	Alka-linity, wat flt inf tit field,	Bicar-bonate, wat flt infl pt titr., field,	Chlor-ide, Bromide water, fltrd, mg/L (71870)	Fluor-ide, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L SiO2 (00955)	Sulfate water, fltrd, mg/L (00945)
Nov												
14...	16.3	96	26.8	7.05	.29	11.0	91	111	.03	4.93	.27	20.2
14...	--	--	--	--	--	--	--	--	--	--	--	--

351440080000601 Local number MG-031, Piedmont Major Aquifer Study Site 52, near Mt. Gilead, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Residue on evap. 180degC wat flt	Ammonia water, mg/L (70300)	Nitrate + nitrite water fltrd, mg/L (00608)	Total nitro- gen, water, wat flt	Ortho- phosphate, water, by anal ysis, mg/L (00613)	Colipge F-spec, Organic carbon, water, fltrd, mg/L (62854)	Colipge CN13hst 2-step, pres or absence	Colipge Ec 2-step, pres or absence	Total coliform, MI MF, water, col/ 100 mL	Total coliform, MI MF, water, col/ 100 mL	Alum- inum, water, fltrd, μg/L (01106)	Anti- mony, water, fltrd, μg/L (01095)	
Nov													
14...	135	<.020	1.00	E.001	1.02	.019	<.4	U	U	<1	<1	<1.6	2.00
14...	--	--	--	--	--	--	--	--	--	<1	<1	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Arsenic water, fltrd, μg/L (01000)	Barium, water, fltrd, μg/L (01005)	Beryll- ium, water, fltrd, μg/L (01010)	Boron, water, fltrd, μg/L (01020)	Cadmium water, fltrd, μg/L (01025)	Chrom- ium, water, fltrd, μg/L (01030)	Cobalt water, fltrd, μg/L (01035)	Copper, water, fltrd, unfltrd μg/L (01040)	Hydro- gen sulfide water, fltrd, mg/L (71875)	Iron, water, fltrd, μg/L (01046)	Lead, water, fltrd, μg/L (01049)	Lithium water, fltrd, μg/L (01130)	Mangan- ese, water, fltrd, μg/L (01056)
Nov													
14...	23.2	11	<.01	E5	.10	<.12	.17	1.5	U	<8	1.50	9.5	3.8
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 5 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Molyb- denum, water, fltrd, μg/L (01060)	Nickel, water, fltrd, μg/L (01065)	Selen- ium, water, fltrd, μg/L (01145)	Silver, water, fltrd, μg/L (01075)	Stront- ium, water, fltrd, μg/L (01080)	Thall- ium, water, fltrd, μg/L (01057)	Vana- dium, water, fltrd, μg/L (01085)	Zinc, water, fltrd, μg/L (01090)	1-Naph- thol, water, fltrd, 0.7u GF (49295)	2,6-Di- ethyl- aniline water, fltrd, 0.7u GF (82660)	2-Chloro- -2',6'- diethyl acet- anilide water, wat flt (61618)	2-Ethy- -6- methyl- aniline water, fltrd, μg/L (04040)	
Nov													
14...	.9	.60	.47	<.1	123	<.04	.28	2.4	<.04	<.006	<.010	E.005	<.010
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

351440080000601 Local number MG-031, Piedmont Major Aquifer Study Site 52, near Mt. Gilead, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 6 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	3,4-Dichloroaniline water, filtd, µg/L (61625)	3,5-Dichloroaniline water, filtd, µg/L (61627)	2methylphenol, water, filtd, µg/L (61633)	Acetochlor, water, filtd, µg/L (49260)	Alachlor, water, filtd, µg/L (46342)	Endosulfan, water, filtd, µg/L (34362)	Atrazine, water, filtd, µg/L (39632)	Azinophos-methoxon, water, filtd, µg/L (61635)	Azinophos-methylwater, filtd, 0.7u GF (82686)	Benzofuran, water, filtd, µg/L (82673)	Carbaryl, water, filtd, µg/L (82680)	Carboxylic acid, water, filtd, µg/L (82674)	Chloropyrifos oxon, water, filtd, µg/L (61636)
Nov													
14...	<.006	<.008	<.005	<.006	<.006	<.006	<.007	<.04	<.120	<.004	<.060	<.020	<.06
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 7 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	cis-Chlorpyrifos water, filtd, µg/L (38933)	cis-Permethrin water, filtd, 0.7u GF (82687)	cis-Propiconazole, water, filtd, µg/L (79846)	Cyanazine, water, filtd, µg/L (04041)	Cyfluthrin, water, filtd, µg/L (61585)	Cyhalothrin, water, filtd, µg/L (61595)	Lambda-cypermethrin, water, filtd, µg/L (61586)	DCPA, water, filtd, 0.7u GF (82682)	Desutilin-fipronil, water, filtd, µg/L (62170)	Diazinon, water, filtd, µg/L (39572)	Dicrotophos, water, filtd, µg/L (38454)	Dieldrin, water, filtd, µg/L (39381)	Dimethoate, water, filtd, 0.7u GF (82662)
Nov													
14...	<.005	<.010	<.006	<.020	<.016	<.004	<.014	<.003	<.012	<.005	<.08	<.009	<.006
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 8 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Disulfoton sulfone water, filtd, µg/L (61640)	Disulfoton foton, water, filtd, 0.7u GF (82677)	Endosulfan sulfate, water, filtd, µg/L (61590)	EPTC, water, 0.7u GF (82668)	Ethion monoxon, water, filtd, µg/L (61644)	Ethion, water, filtd, µg/L (82346)	Ethoprop, water, filtd, 0.7u GF (82672)	Fenamiphos sulfone, water, filtd, µg/L (61645)	Fenamiphos sulfone oxide, water, filtd, µg/L (61646)	Fenamiphos sulfone amide, water, filtd, µg/L (61591)	Desutilin-fipronil, water, filtd, µg/L (62169)	Fipronil sulfide, water, filtd, µg/L (62167)	Fipronil sulfone, water, filtd, µg/L (62168)
Nov													
14...	<.01	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.04	<.03	<.029	<.013	<.024
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

351440080000601 Local number MG-031, Piedmont Major Aquifer Study Site 52, near Mt. Gilead, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 9 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Fipro-	Fonofos	Hexa-	Ipro-	Isofen-	Mala-	Mala-	Metab-	Methyl	Methyl	Metola-	Metri-	
	nil, water, fltrd, μg/L (62166)	water, fltrd, μg/L (04095)	zinone, water, fltrd, μg/L (04025)	dione, water, fltrd, μg/L (61593)	phos, water, fltrd, μg/L (61594)	oxon, water, fltrd, μg/L (61652)	thion, water, fltrd, μg/L (39532)	laxyl, water, fltrd, μg/L (61596)	athion, water, fltrd, μg/L (61598)	para- oxon, water, fltrd, μg/L (61664)	thion, water, fltrd, μg/L (82667)	chlor, water, fltrd, μg/L (39415)	buzin, water, fltrd, μg/L (82630)
Nov													
14...	<.020	<.010	<.008	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 10 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Moli-	Oxy-	Pendi-	Phorate	Phorate	Phosmet	Phosmet	Prome-	Prome-	Propy-	Pro-	Propar-	
	nate, water, fltrd, μg/L (82671)	Myclo- butanil water, fltrd, μg/L (61599)	fluor- fen, water, fltrd, μg/L (61600)										
Nov													
14...	<.025	<.010	<.006	<.012	<.03	<.040	<.05	<.008	<.01	<.006	<.004	<.006	<.04
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 11 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Tebu-	Ter-	trans-	Tri-	1,1,1,2	1,1,1-	1,1,2,2						
	Simazine, water, fltrd, μg/L (04035)	thiuron water, fltrd, μg/L (82670)	bufos sulfone water, fltrd, μg/L (61606)	terbu- floxon water, fltrd, μg/L (61674)	terbu- flos, water, fltrd, μg/L (82675)	ter- butyl- azine, water, fltrd, μg/L (04022)	thio- bencarb water, fltrd, μg/L (82681)	Propi- conazole, water, fltrd, μg/L (79847)	Tribu- phos, water, fltrd, μg/L (61610)	flu- alin, water, fltrd, μg/L (82661)	-Tetra- chloro- ethane, water, unfltrd μg/L (77562)	chloro- ethane, water, unfltrd μg/L (34506)	-Tetra- chloro- ethane, water, unfltrd μg/L (34516)
Nov													
14...	<.006	<.02	<.003	<.04	<.02	<.01	<.010	<.02	<.035	<.006	<.04	<.02	<.10
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

351440080000601 Local number MG-031, Piedmont Major Aquifer Study Site 52, near Mt. Gilead, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 12 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	CFC-113 water, unfltrd	1,1,2- Tri-chloro- ethane, water, unfltrd	1,1-Di- chloro- ethane, water, unfltrd	1,1-Di- chloro- ethene, water, unfltrd	1,1-Di- chloro- propene, water, unfltrd	1,2,3,4 -Tetra- methyl- benzene	1,2,3,5 -Tetra- methyl- benzene	1,2,3- Tri-chloro- benzene	1,2,3- Tri-chloro- propane	1,2,3- Tri-methyl- benzene	1,2,4- Tri-chloro- benzene	1,2,4- Tri-methyl- benzene	Dibromo- chloropropane
	µg/L (77652)	µg/L (34511)	µg/L (34496)	µg/L (34501)	µg/L (77168)	µg/L (49999)	µg/L (50000)	µg/L (77613)	µg/L (77443)	µg/L (77221)	µg/L (34551)	µg/L (77222)	µg/L (82625)
Nov													
14...	<.04	<.06	<.04	<.02	<.04	<.1	<.1	<.1	<.12	<.1	<.1	<.04	<.5
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 13 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	1,2-Di- bromo- ethane, water, unfltrd	1,2-Di- chloro- benzene, water, unfltrd	1,2-Di- chloro- ethane, water, unfltrd	1,2-Di- chloro- propane, water, unfltrd	1,3,5- Tri-methyl- benzene	1,3-Di- chloro- benzene	1,3-Di- chloro- propane	1,4-Di- chloro- benzene	2,2-Di- chloro- propane	2-Chloro- toluene	2-Ethyl- toluene	3-Chloro- propene	4-Chloro- toluene
	µg/L (77651)	µg/L (34536)	µg/L (32103)	µg/L (34541)	µg/L (77226)	µg/L (34566)	µg/L (77173)	µg/L (34571)	µg/L (77170)	µg/L (77275)	µg/L (77220)	µg/L (78109)	µg/L (77277)
Nov													
14...	<.04	<.02	<.1	<.02	<.04	<.04	<.1	<.02	<.06	<.04	<.04	<.08	<.04
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 14 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	4-Iso- propyl- toluene water, unfltrd	Acetone water, unfltrd	Acrylo- nitrile water, unfltrd	Benzene water, unfltrd	Bromo- benzene water, unfltrd	Bromo- chloro- methane water, unfltrd	Bromo- di- chloro- methane water, unfltrd	Bromo- ethene, water, unfltrd	Bromo- methane water, unfltrd	Tri- bromo- methane water, unfltrd	Bromo- methane water, unfltrd	Carbon di- sulfide water, unfltrd	Chloro- benzene water, unfltrd	Chloro- ethane, water, unfltrd
	µg/L (77356)	µg/L (81552)	µg/L (34215)	µg/L (34030)	µg/L (81555)	µg/L (77297)	µg/L (32101)	µg/L (50002)	µg/L (32104)	µg/L (34413)	µg/L (77041)	µg/L (34301)	µg/L (34311)	
Nov														
14...	<.08	<4	<.4	<.02	<.02	<.06	<.04	<.1	<.08	<.4	<.06	<.02	<.1	
14...	--	--	--	--	--	--	--	--	--	--	--	--	--	

351440080000601 Local number MG-031, Piedmont Major Aquifer Study Site 52, near Mt. Gilead, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 15 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	cis-Chloro-methane water, unfltrd	cis-1,2-Dichloro-ethene, water, unfltrd	cis-1,3-Dichloro-propene, water, unfltrd	Di-bromo-chloro-methane, water, unfltrd	Di-bromo-chloro-methane, water, unfltrd	Di-chloro-fluoro-methane, water, unf	Di-chloro-methane, water, unfltrd	Di-ethyl ether, water, unfltrd	Diiso-propyl ether, water, unfltrd	Ethyl methacrylate, water, unfltrd	Ethyl methyl ketone, water, unfltrd	Ethyl benzene, water, unfltrd	Hexachlorobutadiene, water, unfltrd
	µg/L (34418)	µg/L (77093)	µg/L (34704)	µg/L (32105)	µg/L (30217)	µg/L (34668)	µg/L (34423)	µg/L (81576)	µg/L (81577)	µg/L (73570)	µg/L (81595)	µg/L (34371)	µg/L (39702)
Nov													
14...	<.1	<.02	<.10	<.1	<.04	<.14	<.04	<.1	<.06	<.1	<1.6	<.04	<.1
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 16 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Hexachloroethane, water, unfltrd	Iodo-methane, water, unfltrd	Iso-butyl methyl ketone, water, unfltrd	Iso-propylbenzene, water, unfltrd	Methyl acrylonitrile, water, unfltrd	Methyl acrylate, water, unfltrd	Methyl methacrylate, water, unfltrd	Methyl tert-pentyl ether, water, unfltrd	Methyl + para-Xylene, water, unfltrd	Methyl Naphthalene, water, unfltrd	Methyl n-butyl ketone, water, unfltrd	n-Butyl benzene, water, unfltrd	Propylbenzene, water, unfltrd
	µg/L (34396)	µg/L (77424)	µg/L (78133)	µg/L (77223)	µg/L (81593)	µg/L (49991)	µg/L (81597)	µg/L (50005)	µg/L (85795)	µg/L (34696)	µg/L (77103)	µg/L (77342)	µg/L (77224)
Nov													
14...	<.1	<.40	<.4	<.04	<.2	<.6	<.2	<.06	<.08	<.2	<.6	<.1	<.04
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 17 of 19

[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	o-Xylene, water, unfltrd	sec-Butylbenzene, water, unfltrd	Styrene, water, unfltrd	t-Butyl ethyl ether, water, unfltrd	Methyl t-butyl ether, water, unfltrd	tert-Butylbenzene, water, unfltrd	Tetra-chloroethene, water, unfltrd	Tetra-chloromethane, water, unfltrd	Tetra-hydrofuran, water, unfltrd	Toluene, water, unfltrd	trans-1,2-Dichloroethene, water, unfltrd	trans-1,3-Dichloropropene, water, unfltrd	trans-1,4-Dichlorobutene, water, unf
	µg/L (77135)	µg/L (77350)	µg/L (77128)	µg/L (50004)	µg/L (78032)	µg/L (77353)	µg/L (34475)	µg/L (32102)	µg/L (81607)	µg/L (34010)	µg/L (34546)	µg/L (34699)	µg/L (73547)
Nov													
14...	<.04	<.04	<.04	<.04	<.1	<.06	<.04	<.08	<1	<.02	<.02	<.10	<.6
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

351440080000601 Local number MG-031, Piedmont Major Aquifer Study Site 52, near Mt. Gilead, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

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[QC, quality control sample. Remark codes: <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not detected.]

Date	Tri-chloro-ethene, water, unfltrd	Tri-chloro-fluoro-methane	Tri-chloro-methane	Vinyl methane	Di-chloride, water, unfltrd	Gross alpha 30 day recount	Gross alpha radioac 72 hr, wat unf	Gross beta 30 day recount	Gross beta radioac 72 hr, wat unf	Ra-226, water, filtrd, radon method	Ra-228, water, filtrd, method	Rn-222, 2-sigma	Rn-222, water, unfltrd
	µg/L (39180)	µg/L (34488)	µg/L (32106)	µg/L (39175)	µg/L (38775)	pCi/L (63016)	pCi/L (63014)	pCi/L (63017)	pCi/L (63015)	pCi/L (09511)	pCi/L (81366)	pCi/L (76002)	pCi/L (82303)
Nov													
14...	<.02	<.08	E.01	<.1	<.01	R.3	R.5	R.7	R.3	.19	.36	32	1,160
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO
SEPTEMBER 2008

Part 19 of 19

[QC, quality control sample. Remark codes:
 <, less than; E, estimated; R, radchem non-detect, below ssLc; U, analyzed for but not
 detected.]

Date	Uranium natural water, filtrd, µg/L (22703)	Data base number	Medium code
Nov			
14...	.39	01	WG
14...	--	04	WGQ